AWOS - Automated Weather Observing System (AWOS) is a suite of sensors, which measures, collects and broadcasts weather data to help meteorologists, pilots and flight dispatchers prepare and monitor weather forecasts, plan flight routes, and provide necessary information for correct takeoffs and landings. The data collected may include wind speed, direction, and gusts, temperature and dew point, cloud height and coverage, visibility, present weather (rain, drizzle, snow), rain accumulation, thunderstorms and lightning, altimeter and fog, mist, haze, freezing fog. There are over 600 AWOS site throughout the U.S.

MAPSO - Microcomputer-Aided Paperless Surface Observations. METAR hourly surface weather observations that are measured primarily at major airports. Observations are made by automated equipment and may be augmented by a human observer. The stations are usually fully instrumented and therefore record a complete range of meteorological parameters. The parameters usually include a report of wind, runway visibility, present weather, sky condition, temperature and dew point.

Navy METAR - Aviation Routine Weather Report. METAR is the primary observation code used in the United States to satisfy requirements for reporting surface meteorological data. METAR contains a report of wind, visibility, runway visual range, present weather, sky condition, temperature, dew point, and altimeter setting collectively referred to as "the body of the report". In addition, coded and/or plain language information which elaborates on data in the body of the report may be appended to the METAR. This significant information can be found in the section referred to as "Remarks". The contents of the remarks will vary according to the type of weather station. At designated stations, the METAR may be abridged to include one or more of the above elements.

ASOS (NWS) - The Automated Surface Observing Systems (ASOS) program is a joint effort of the National Weather Service (NWS), the Federal Aviation Administration (FAA), and the Department of Defense (DOD). The ASOS systems serves as the nation's primary surface weather observing network. ASOS is designed to support weather forecast activities and aviation operations and, at the same time, support the needs of the meteorological, hydrological, and climatological research communities.

With the largest and most modern complement of weather sensors, ASOS has significantly expanded the information available to forecasters and the aviation community. The ASOS network has more than doubled the number of full-time surface weather observing locations. ASOS works non-stop, updating observations every minute, 24 hours a day, every day of the year.

ASOS detects significant changes, disseminating hourly and special observations via the networks. Additionally, ASOS routinely and automatically provides computer-generated voice observations directly to aircraft in the vicinity of airports, using FAA ground-to-air radio. These messages are also available via a telephone dial-in port. ASOS observes, formats, archives and transmits observations automatically. ASOS transmits a special

report when conditions exceed preselected weather element thresholds, e.g., the visibility decreases to less than 3 miles.

Reports basic weather elements:

- Sky condition:cloud height and amount (clear, scattered, broken, overcast) up to 12,000 feet
- Visibility (to at least 10 statute miles)
- Basic present weather information: type and intensity for rain, snow, and freezing rain
- Obstructions to vision: fog, haze
- Pressure: sea-level pressure, altimeter setting
- Ambient temperature, dew point temperature
- Wind: direction, speed and character (gusts, squalls)
- Precipitation accumulation
- Selected significant remarks including- variable cloud height, variable visibility, precipitation beginning/ending times, rapid pressure changes, pressure change tendency, wind shift, peak wind.

ASOS (FAA) - Automated Weather Observing System (AWOS) is a suite of sensors, which measures, collects and broadcasts weather data to help meteorologists, pilots and flight dispatchers prepare and monitor weather forecasts, plan flight routes, and provide necessary information for correct takeoffs and landings. The data collected may include wind speed, direction, and gusts, temperature and dew point, cloud height and coverage, visibility, present weather (rain, drizzle, snow), rain accumulation, thunderstorms and lightning, altimeter and fog, mist, haze, freezing fog.

CRN - The U.S. Climate Reference Network (USCRN) is a network of climate stations now being developed as part of a National Oceanic and Atmospheric Administration (NOAA) initiative. Its primary goal is to provide future long-term homogeneous observations of temperature and precipitation that can be coupled to long-term historical observations for the detection and attribution of present and future climate change. Data from the USCRN will be used in operational climate monitoring activities and for placing current climate anomalies into an historical perspective. The USCRN will also provide the United States with a reference network that meets the requirements of the Global Climate Observing System (GCOS). If fully implemented, the network will consist of about 110 stations nationwide. Implementation of the USCRN is contingent on the availability of funding. Noted will be hourly observations of temperature and precipitation and wind speed at a 1.5 meter elevation.